Index of Papers Published in Journal of Aircraft

Volume 4—January through December 1967

Issue	Pages	Issue	Pages
January–February	1–80	July–August	273–400
March–April	81–176	September–October	401–480
May–June	177–272	November–December	481–576

EN, TC, and SA indicate Engineering Note, Technical Comment, and Survey Article, respectively.

AUTHORS

Alexander, W. T., Jr. (see Pruyn, R. R.)
Alscher, H. (see Schaeffler, J.)
Alvey, Victor W. (see Emero, Donald H.)
Anderson, C. H. (see Sutter, J. F.)
Anderson, Ernest W. (see Seath, Donald D.)
Anderson, G. F. Optimum configuration of a tethering cable..... 261
Andrew, G. M. (see Cahn, M. S.)
Ankenbruck, Herman O. An approach to penetration cost effectiveness evaluation. (EN)..... 553
Asdurian, H. (see Watson, W. W.)
Asfour, K. J. Analysis of dynamic stress in an inflating parachute..... 429
Azuma, Akira. Dynamic analysis of the rigid rotor system..... 203
Ball, H. Glenn (see Lee, Vernon A.)
Behan, R. A. and Siciliani, F. A. Landing task and pilot acceptance of displays..... 141
Benveniste, J. E. and Cheng, D. H. Sonic boom effects on beams loosely bound to their supports..... 494
Billet, A. B. Aircraft systems studies under long-term world environmental storage. (EN)..... 475
Bogdanovic, J. A. (see Hall, G. R.)
Brabets, Robert I., Hersh, Charles K., and Klein, Morton J. Ozone measurement survey in commercial jet aircraft..... 59
Brizendine, John C. and Strang, Charles R. The future transport world..... 481
Buffum, R. S. and Robertson, W. T. A hover augmentation system for helicopters..... 315
Burdges, Kenneth P. (see Gilman, Bobby G.)
Burghart, G. H. (see Wooler, P. T.)
Cahn, M. S. and Andrew, G. M. Determination of subsonic drag rise by hodograph plane analysis. (EN)..... 267
Cannon, T. C. (see Genin, Joseph)
Carlson, H. W. and Morris, O. A. Wind-tunnel sonic-boom testing techniques..... 245
Carta, Franklin O. Unsteady normal force on an airfoil in a periodically stalled inlet flow..... 416
Cheng, D. H. (see Benveniste, J. E.)
Clark, D. G. (see Head, M. R.)
Clauss, John S., Jr. (see Heermann, Hugo P.)
Connor, M. A. and Otto, D. R. A closed-form solution for a gliding lateral turn at constant height..... 115
Covert, Eugene E. Wind-tunnel simulation of store jettison with the aid of an artificial gravity generated by magnetic fields..... 45
Coyne, James E. and Sparks, Robert B. New titanium alloys for structural forgings..... 2
Dempster, John B. and Roger, Kenneth L. Evaluation of B-52 structural response to random turbulence with stability augmentation systems..... 507
Disney, T. E. (see Wittel, W. T.)
Dressler, Robert F. New approach to air safety statistics..... 347
Ducote, Richard J. and Speelman, Ralph J. U. S. Air Force concepts for accurate delivery of equipment and supplies..... 383
Dunkelberg, Stephen B., Fagan, Ralph T., and Giss, Warren A. Exhaust gas flowfield from the deflection of twin jets..... 278
Durand, Tulvio S. and Wasicko, Richard J. Factors influencing glide path control in carrier landing..... 146
Ellen, C. H. A towed, hypersonic balloon..... 526
Emero, Donald H. and Alvey, Victor W. Structures cost effectiveness..... 218
Ericsson, Lars Eric. Comment on unsteady airfoil stall. (TC)..... 478
Fagan, Ralph T. (see Dunkelberg, Stephen B.)
Falkenheiner, Helmut. Vibration analysis of complex structures consisting of many members. (EN)..... 568
Farrell, James L. Analytic platforms in cruising aircraft..... 52
Firebaugh, John M. Evaluations of a spectral gust model using *VGH* and *V-G* flight data..... 518
FitzSimmons, R. D. Conventional aircraft possibilities for Boston-Washington service..... 366
Friedman, M. B. (see Myers, M. K.)
Gallagher, J. T. (see Wooler, P. T.)
Gasko, William F. (see Muller, George L.)
Genin, Joseph and Cannon, T. C. Equilibrium configuration and tensions of a flexible cable in a uniform flowfield..... 300
Gertsen, W. Marvin (see Shomber, Henry A.)
Gilman, Bobby G. and Burdges, Kenneth P. Rapid estimation of wing aerodynamic characteristics for minimum induced drag. (EN). 563
Giss, Warren A. (see Dunkelberg, Stephen B.)
Goodman, Theodore R. (see Kaplan, Paul)
Gyorgyfalvy, Dezso. Possibilities of drag reduction by the use of flexible skin..... 186
Haffner, J. W. Space radiation dose rates in the earth's atmosphere... 65
Hall, G. R. Scaling VTOL aerodynamic suckdown forces. (EN)..... 393
——**and Bogdanovic, J. A.** Response of bare wire thermocouples to temperature variations in a jet engine intake. (EN)..... 394
Hallstaff, Thomas H. (see Sigalla, Armand)
Han, K. W. and Thaler, G. J. Analysis and design of missile and aircraft control systems..... 121
Hanisch, Bernard. Inertial platform stabilization criteria for arbitrary vehicle maneuvers..... 534
Head, M. R. and Clark, D. G. Flight experiments on suction for high lift..... 81
Headley, J. W. (see Lavi, R.)
Heermann, Hugo P. and Clauss, John S., Jr. Alternate approach for aerospacecraft design sensitivities. (EN)..... 270
Heinemann, Milton and Hiatt, M. A. Quick-change (*QC*) airplane system: a prospective..... 42
——Handling people in long-haul air transportation..... 499
Hersh, Charles K. (see Brabets, Robert I.)
Hess, J. L. and Smith, A. M. O. Static-pressure probes derived from supersonic slender-body theory..... 409
Hiatt, M. A. (see Heinemann, M.)
Highley, J. N. and Schroeder, P. M. Application of aerodynamic deceleration systems to target drones..... 308
Hough, Gary R. A numerical study of the fluctuating flowfield of a uniformly loaded propeller..... 36
——**and Ordway, D. E.** The mean flow streamlines of a finite-bladed propeller. (EN)..... 561
Hunter, Paul A. Initial *VGH* data on operations of small turbojets in commercial transport service..... 513
Hurley, F. X. Vortex separation above delta leading edges. (EN).... 140
Ibrahim, Shukry K. Potential flowfield and added mass of the idealized hemispherical parachute..... 96
Ichikawa, Teruo. Linear aerodynamic theory of rotor blades..... 210
Jones, David I. G. Effect of isolated tuned dampers on response of multispan structures..... 343
Kaplan, Paul and Goodman, Theodore R. Use of jet-flapped hydrofoils as ship antipitching fins. (MS8)..... 165
Kentfield, J. A. C. Nozzles for jet-lift V/STOL aircraft..... 283
Kiciman, M. O. Useful life for a panel with intermediate supports undergoing creep. (EN)..... 75
——A random-sampling procedure with applications to structural synthesis problems..... 333
Klein, Morton J. (see Brabets, Robert I.)
Kohlman, David L. Rolling moment due to sideslip of delta wings. (EN)..... 565
Krase, W. H. Thrust deflection for cruise. (EN)..... 162
Larrabee, E. Eugene. Aerodynamic penetration and radius as unifying concepts in flight mechanics..... 28
Lavi, Rahim. An experimental investigation of VTOL lift-engine inlet. 125
——**and Headley, J. W.** Feasibility investigation of aerodynamic round-lip inlet. (EN)..... 159
——(see Watson, W. W.)
Lawrence, Kent L. Erratum: "Bending-torsion transfer matrices associated with swept surfaces" (TC)..... 80
Lee, Vernon A., Ball, H. Glenn, Wadsworth, E. A., Moran, W. J. and McLeod, J. D. Computerized aircraft synthesis..... 402
Levinsky, E. S. (See Strand T.)
Lissaman, Peter B. S. Design data for the jet flap in ground effect. (EN) 555
Liu, Mei-Kao. Skin-friction drag at supersonic-hypersonic speeds with transition. (EN)..... 264
Losey, Donald and Tabakoff, Widen. A technique for estimating axial flow compressor potential peak efficiency and related performance.... 133
Lu, S. Y. and Sun, C. L. Vibrations of thin conical shells subjected to sudden heating..... 11

Lundry, J. L. Minimum swept-wing induced drag with constraints on lift and pitching moment. (EN) ... 73
Lynn, Robert R. Erratum: "Wing-rotor interactions" (TC) ... 272
Mantle, P. J. (see Sheets, H. E.)
Martin, C. S. Hydrodynamics of tire hydroplanning ... 136
Mazzitelli, Frederick R. Economic considerations in the use of carrier-onboard-delivery aircraft ... 302
McLeod, J. D. (see Lee, Vernon A.)
Mehus, T. E. (see Wasson, H. R.)
Migdal, David (see Milford, Christopher M.)
Milford, Christopher M. and Migdal, David. Effect of back pressure on nozzle thrust. (EN) ... 562
Mills, George R. Improving the quality of motion reproduction in moving-base, piloted flight simulators ... 439
Moeller, John H. A method of load prediction for parachutes in cluster ... 339
Moran, W. J. (see Lee, Vernon A.)
Morris, O. A. (see Carlson, H. W.)
Motycka, David L. and Skowronek, Peter J., Jr. Use of statistically designed experiments in wind-tunnel test programs ... 297
Muller, George L. and Gasko, William F. Subsonic-transonic drag of supersonic inlets ... 231
——**and Gasko, William F.** Studies of drag-reduction methods for subsonic operation of supersonic inlets ... 322
Muller, John Frederick. Stability-augmentation system gain determination by digital computer ... 434
——Systematic determination of simplified gain scheduling programs ... 529
Murthy, S. N. B. Simple scaling parameters for air-breathing engines. (EN) ... 558
Myers, M. K. and Friedman, M. B. Linear theory of superbooms generated by refraction ... 488
Neal, T. Peter. Frequency and damping from time histories: maximum-slope method. (EN) ... 76
Nicholas, Jack W. and Prince, Robert K., Jr. An engineering approach to mathematical reliability models ... 377
Olsen, Clifford E. and Romero, Marco A. ASW patrol aircraft of the future ... 224
Ordway, D. E. (see Hough, Gary R.)
Ortell, A. R. Supersonic and hypersonic lift of highly swept wings and wing-body combinations. (EN) ... 78
Otto, D. R. (see Connor, M. A.)
Pepper, William B. A 20-ft-diam ribbon parachute for deployment at dynamic pressures above 400 psf (EN) ... 265
Postlewaite, John E. Erratum: "Thrust performance of suppressor nozzles" (TC) ... 480
Pratt, Kermit (see Steiner, Roy)
Prince, Robert K., Jr. (see Nicholas, Jack W.)
Pruyn, R. R. and Alexander, W. T., Jr. USAAVLABS tandem rotor airloads measurement program ... 255
Rae, William H., Jr. Limits on minimum-speed V/STOL wind-tunnel tests ... 249
Rehbinder, Göran. Analytical definition of aircraft shape ... 544
Reilly, David Norris. A useful method of airfoil stall prediction. (EN) 567
Robertson, W. T. (see Buffum, R. S.)
Roger, Kenneth L. (see Dempster, John B.)
Romero, Marco A. (see Olsen, Clifford E.)
Saelman, B. A note on the optimum design of I-section beams. (EN) 477
Saxton, David W. Nature and causes of clear-air turbulence ... 356
Schaeffler, J., Alscher, H., Steinmetz, G., and Sinacori, J. B. Control-power usage for maneuvering in hover of the VJ 101aircraft ... 445
Schmidt, Carl F. Milestones and challenges (Editorial) ... 1
—— A welcome to a new journal (Editorial) ... 177
Schroeder, P. M. (see Highley, J. N.)
Schule, J. J., Jr. and Wilkerson, J. C. An oceanographic aircraft. (EN, MSS) ... 174
Schweikhard, William. A method for in-flight measurement of ground effect on fixed-wing aircraft ... 101
Seath, Donald D. and Anderson, Ernest W. Vibration of an inflatable fabric wing model ... 22
Sebastian, C. R. Thermal-stability aspects of commercial kerosine for the supersonic transport ... 292
Sheets, H. E. and Mantle, P. J. Air cushion craft propulsion ... 237
Shomber, Henry A. and Gertsen, W. Marvin. Longitudinal handling qualities criteria: an evaluation ... 371
Siciliani, F. A. (see Behan, R. A.)
Siewert, R. F. and Stewart, V. R. Use of boundary-layer control on a supersonic attack-reconnaissance aircraft ... 89
Sigalla, Armand and Hallstaff, Thomas H. Aerodynamics of power-plant installation on supersonic aircraft ... 273
Simitses, George J. A note on the general instability of eccentrically stiffened cylinders. (EN) ... 473
Sinacori, J. B. (see Schaeffler, J.)
Skowronek, Peter J., Jr. (see Motycka, David L.)
Smith, A. M. O. (see Hess, J. L.)
Smith, M. C. Comments on "Aerodynamic penetration and radius as unifying concepts in flight mechanics" (TC) ... 399
——Comment on "Wind-tunnel simulation of store jettison with the aid of an artificial gravity generated by magnetic fields" (TC) ... 570
Snider, H. Lawrence. Redundant analysis of a group of airframe problems. (EN) ... 556
Sopher, R. Design of a fairing for the junction of two wings ... 379
Sparks, Robert B. (see Coyne, James E.)
Speelman, Ralph J. (see Ducote, Richard J.)
Spillman, J. J. VTOL short range jet airliners ...
Steiner, Roy and Pratt, Kermit. Some applications of power spectra to airplane turbulence problems ... 360
Steinmetz, G. (see Schaeffler, J.)
Stewart, V. R. (see Siewert, R. F.)
Strand, T., Levinsky, E. S., and Wei, M. H. Y. Unified performance theory for V/STOL aircraft in equilibrium flight. Part I ... 105
——**Levinsky, E. S. and Wei, M. H. Y.** Unified performance theory for V/STOL aircraft in equilibrium flight. Part II ... 193
——**Inviscid-incompressible-flow theory of normal and slightly oblique impingement of a static round jet on the ground** ... 466
Strang, Charles R. (see Brisendine, John C.)
Sun, C. L. (see Lu, S. Y.)
Sutter, J. F. and Anderson, C. H. Boeing model 747 ... 452
Tabakoff, Widen (see Losey, Donald)
Thaler, G. J. (see Han, K. W.)
Thelander, John A. Use of variational analysis in aerospacecraft design ... 178
Wadsworth, E. A. (see Lee, Vernon A.)
Wasicko, Richard J. (see Durand, Tulvio S.)
Wasson, H. R. and Mehus, T. E. A segmented wing test technique for obtaining spanwise load distributions ... 327
Watson, W. W., Lavi, Rahim, and Asdurian, H. A large-scale test vehicle for VTOL ground effects studies ... 547
Wei, M. H. Y. (see Strand, T.)
West, A. A. Two-dimensional air-cushion vehicle critical forward speeds. (EN) ... 559
Wilkerson, J. C. (see Schule, J. J., Jr.)
Wittel, W. T. and Disney, T. E. Relationship between aircraft design and flight-measured loads ... 422
Wooler, P. T., Burghart, G. H., and Gallagher, J. T. Pressure distribution on a rectangular wing with a jet exhausting normally into an airstream ... 537
Wynveen, R. A. A logistics-independent oxygen system for military aircraft ... 502
Yamana, Masao. Stress-distribution measurement by means of vibration method ... 16
Yount, T. L. Aerospace ground equipment reduction by built-in testing. (EN) ... 396

SUBJFCTS

AERODYNAMICS AND HYDRODYNAMICS

Aircraft Aerodynamics

A numerical study of the fluctuating flowfield of a uniformly loaded propeller. Gary R. Hough ... 36
Wind-tunnel simulation of store jettison with the aid of an artificial gravity generated by magnetic fields. Eugene E. Covert ... 48
Flight experiments on suction for high lift. M. R. Head and D. G. Clark ... 81
Use of boundary-layer control on a supersonic attack-reconnaissance aircraft. R. F. Siewert and V. R. Stewart ... 89
Potential flowfield and added mass of the idealized hemispherical parachute. Shukry K. Ibrahim ... 96
A method for in-flight measurement of ground effect on fixed-wing aircraft. William Schweikhard ... 101
Unified performance theory for V/STOL aircraft in equilibrium flight. Part I T. Strand, E. S. Levinsky, and M. H. Y. Wei ... 105
A closed-form solution for a gliding lateral turn at constant height. M. A. Connor and D. R. Otto ... 115
An experimental investigation of VTOL lift-engine inlet. R. Lavi ... 125
Hydrodynamics of tire hydroplaning. C. S. Martin ... 136
Possibilities of drag reduction by the use of flexible skin. Dezso Gyorgyfalvy ... 186
Unified performance theory for V/STOL aircraft in equilibrium flight. Part II. T. Strand, E. S. Levinsky, and M. H. Y. Wei ... 193
Equilibrium configuration and tensions of a flexible cable in a uniform flowfield. Joseph Genin and T. C. Cannon ... 200
Linear aerodynamic theory of rotor blades. Teruo Ichikawa ... 210
Limits on minimum-speed V/STOL wind-tunnel tests. William H. Rae Jr. ... 249
Optimum configuration of a tethering cable. G. F. Anderson ... 261
Exhaust gas flowfield from the deflection of twin jets. Stephen B. Dunkelberg, Ralph T. Fagan, and Warren A. Giss ... 278
Application of aerodynamic deceleration systems to target drones. J. N. Highley and P. M. Schroeder ... 308
Studies of drag-reduction methods for subsonic operation of supersonic inlets. George L. Muller and William F. Gasko ... 322
Longitudinal handling qualities criteria: an evaluation. Henry A. Shomber and W. Marvin Gertsen ... 371
Design of a fairing for the junction of two wings. R. Sopher ... 379
Inviscid-incompressible-flow theory of normal and slightly oblique impingement of a static round jet on the ground. T. Strand ... 466
A towed, hypersonic balloon. C. H. Ellen ... 526
Analytical definition of aircraft shape. Göran Rehbinder ... 544
A large-scale test vehicle for VTOL ground effects studies. W. W. Watson, Rahim Lavi, and H. Asdurian ... 547
Minimum swept-wing induced drag with constraints on lift and pitching moment. J. L. Lundry (EN) ... 73
Scaling of VTOL aerodynamic suckdown forces. G. R. Hall (EN) ... 393
Design data for the jet flap in ground effect. Peter B. S. Lissaman (EN) ... 555
Two-dimensional air-cushion vehicle critical forward speeds. A. A. West (EN) ... 559
A useful method of airfoil stall prediction. David Norris Reilly (EN). 567
The mean flow streamlines of a finite-bladed propeller. Gary R. Hough and D. E. Ordway (EN) ... 561
Rapid estimation of wing aerodynamic characteristics for minimum induced drag. Bobby G. Gilman and Kenneth P. Burdges (EN) .. 563

Rolling moment due to sideslip of delta wings. David L. Kohlman (EN) 585
Comment on unsteady airfoil stall. Lars Eric Ericsson (TC) 478
Comment on "Wind-tunnel simulation of store jettison with the aid of an artificial gravity generated by magnetic fields." M. C. Smith (TC) 570
Use of variational analysis in aerospacecraft design. John A. Thelander 178
Subsonic-transonic drag of supersonic inlets. George L. Muller and William F. Gasko 231
Aerodynamics of powerplant installation on supersonic aircraft. Armand Sigalla and Thomas H. Hallstaff 273
Computerized aircraft synthesis. Vernon A. Lee, H. Glenn Ball, E. A. Wadsworth, W. J. Moran, and J. D. McLeod 402
Static-pressure probes derived from supersonic slender-body theory. J. L. Hess and A. M. O. Smith 409
Linear theory of superbooms generated by refraction M. K. Myers and M. B. Friedman 486
Pressure distribution on a rectangular wing with a jet exhausting normally into an airstream. P. T. Wooler, G. H. Burghart, and J. T. Gallagher 537
Supersonic and hypersonic lift of highly swept wings and wing-body combinations. A. R. Ortell (EN) 78
Feasibility investigation of aerodynamic round-lip inlet. R. Lavi and J. W. Headley (EN) 159
Vortex separation above delta leading edges. F. X. Hurley (EN) 160
Thrust deflection for cruise. W. H. Krase (EN) 162
Skin-friction drag at supersonic-hypersonic speeds with transition. Mei-Kao Liu (EN) 264
Determination of subsonic drag rise by hodograph plane analysis. M. S. Cahn and G. M. Andrew (EN) 267

Hydrofoils

Use of jet-flapped hydrofoils as ship antipitching fins. Paul Kaplan and Theodore R. Goodman (MSS) 165

Rotary Wing

Erratum: "Wing-rotor interactions." Robert R. Lynn (TC) 272

Sonic Boom

Wind-tunnel sonic-boom testing techniques. H. W. Carlson and O. A. Morris 245
Linear theory of superbooms generated by refraction. M. K. Myers and M. B. Friedman 486

AIRCRAFT DESIGN, MAINTAINABILITY, AND RELIABILITY

An engineering approach to mathematical reliability models. Jack W. Nicholas and Robert K. Prince Jr. 377
Aircraft systems studies under long-term world environmental storage. A. B. Billet (EN) 475
New approach to air safety statistics. Robert F. Dressler 347
Aerospace ground equipment reduction by built-in testing. T. L. Yount (EN) 396

AIRCRAFT OPERATIONS

Hydrodynamics of tire hydroplaning. C. S. Martin 136
Some applications of power spectra to airplane turbulence problems. Roy Steiner and Kermit Pratt 360
A logistics-independent oxygen system for military aircraft. R. A. Wynveen 502
Initial *VGH* data on operations of small turbojets in commercial transport service. Paul A. Hunter 513
Inertial platform stabilization criteria for arbitrary vehicle maneuvers. Bernard Hanisch 534

PROPULSION

An experimental investigation of VTOL lift-engine inlet. R. Lavi 125
A technique for estimating axial flow compressor potential peak efficiency and related performance. Donald Losey and Widen Tabakoff 133
Air cushion craft propulsion. H. E. Sheets and P. J. Mantle 237
Aerodynamics of powerplant installation on supersonic aircraft. Armand Sigalla and Thomas H. Hallstaff 273
Exhaust gas flowfield from the deflection of twin jets. Stephen B. Dunkelberg, Ralph T. Fagan, and Warren A. Giss 278
Nozzles for jet-lift V/STOL aircraft. J. A. C. Kentfield 283
Unsteady normal force on an airfoil in a periodically stalled inlet flow. Franklin O. Carta 416
Simple scaling parameters for air-breathing engines. S. N. B. Murthy (EN) 558
Effect of back pressure on nozzle thrust. Christopher M. Milford and David Migdal (EN) 562
Erratum: "Thrust performance of suppressor nozzles." John E. Postlewaite (TC) 480
Subsonic-transonic drag of supersonic inlets. George L. Muller and William F. Gasko 231
Studies of drag-reduction methods for subsonic operation of supersonic inlets. George L. Muller and William F. Gasko 322
Feasibility investigation of aerodynamic round-lip inlet. R. Lavi and J. W. Headley (EN) 159
Thrust deflection for cruise. W. H. Krase (EN) 162
Thermal-stability aspects of commercial kerosine for the supersonic transport. C. R. Sebastian 292

STRUCTURES AND MATERIALS

Structural Loads and Criteria

Stress-distribution measurement by means of vibration method. Masao Yamana 16
USAAVLABS tandem rotor airloads measurement program. R. R. Pruyn and W. T. Alexander Jr. 255
A segmented wing test technique for obtaining spanwise load distributions. H. R. Wasson and T. E. Mehus 327
A random-sampling procedure with applications to structural synthesis problems. M. O. Kiciman 333
A method of load prediction for parachutes in cluster. John H. Moeller 339
Relationship between aircraft design and flight-measured loads. W. T. Wittel and T. E. Disney 422
Analysis of dynamic stress in an inflating parachute. K. J. Asfour 429
Evaluation of B-52 structural response to random turbulence with stability augmentation systems. John B. Dempster and Kenneth L. Roger 507
Evaluations of a spectral gust model using *VGH* and *V-G* flight data. John M. Firebaugh 518

Airplane Structures, Design, and Fabrication

Structures cost effectiveness. Donald H. Emero and Victor W. Alvey. 218
A note on the optimum design of I-section beams. B. Saelman (EN). 477
Useful life for a panel with intermediate supports undergoing creep. M. O. Kiciman (EN) 75
Redundant analysis of a group of airframe problems. H. Lawrence Snider (EN) 556
Erratum: "Bending-torsion transfer matrices associated with swept surfaces." Kent L. Lawrence (TC) 80

Structural Mechanics, Vibration, and Stability

Vibration of an inflatable fabric wing model. Donald D. Seath and Ernest W. Anderson 22
A random-sampling procedure with applications to structural synthesis problems. M. O. Kiciman 333
Effect of isolated tuned dampers on response of multispan structures. David I. G. Jones 343
Analysis of dynamic stress in an inflating parachute. K. J. Asfour 429
Sonic boom effects on beams loosely bound to their supports. J. E. Benveniste and D. H. Cheng 494
Useful life for a panel with intermediate supports undergoing creep. M. O. Kiciman (EN) 75
Frequency and damping from time histories: maximum-slope method. T. Peter Neal (EN) 76
A note on the general instability of eccentrically stiffened cylinders. George J. Simitses (EN) 473
Redundant analysis of a group of airframe problems. H. Lawrence Snider (EN) 556
Vibration analysis of complex structures consisting of many members. Helmut Falkenhhiner. (EN) 568
Vibrations of thin conical shells subjected to sudden heating. S. Y. Lu and C. L. Sun 11
Stress-distribution measurement by means of vibration method. Masao Yamana 16
Vibration of an inflatable fabric wing model. Donald D. Seath and Ernest W. Anderson 22
Erratum: "Bending-torsion transfer matrices associated with swept surfaces." Kent L. Lawrence (TC) 80

Properties of Materials

New titanium alloys for structural forgings. James E. Coyne and Robert B. Sparks

SYSTEMS ENGINEERING AND MISSION ANAYLSIS

Quick-change (*QC*) airplane system: a prospective. M. Heinemann and M. A. Hiatt 42
Boeing model 747. J. F. Sutter and C. H. Anderson 452
The future transport world. John C. Brizendine and Charles R. Strang 481

Handling people in long-haul air transportation. Milton Heinemann. 499
VTOL short range jet airliners. J. J. Spillman. 457
An approach to penetration cost effectiveness evaluation. Herman O. Ankenbruck (EN). 553
Analytic platforms in cruising aircraft. James L. Farrell. 52
ASW patrol aircraft of the future. Clifford E. Olsen and Marco A. Romero. 224
Economic considerations in the use of carrier-onboard-delivery aircraft. Frederick R. Mazzitelli. 302
Conventional aircraft possibilities for Boston-Washington service. R. D. FitzSimmons. 366
U.S. Air Force concepts for accurate delivery of equipment and supplies. Richard J. Ducote and Ralph J. Speelman. 383
Computerized aircraft synthesis. Vernon A. Lee, H. Glenn Ball, E. A. Wadsworth, W. J. Moran, and J. D. McLeod. 402
Alternate approach for aerospacecraft design sensitivities. Hugo P. Heermann and John S. Clauss Jr. (EN). 270
Aerodynamic penetration and radius as unifying concepts in flight mechanics. E. Eugene Larrabee. 28
Use of variational analysis in aerospacecraft design. John A. Thelander. 178
Comments on "Aerodynamic penetration and radius as unifying concepts in flight mechanics." M. C. Smith (TC). 399

VEHICLE DYNAMICS

Airplane and Spacecraft Stability and Control

Flight experiments on suction for high lift. M. R. Head and D. G. Clark. 81
Use of boundary-layer control on a supersonic attack-reconnaissance aircraft. R. F. Siewert and V. R. Stewart. 89
Analysis and design of missile and aircraft control systems. K. W. Han and G. J. Thaler. 121
Longitudinal handling qualities criteria: an evaluation. Henry A. Shomber and W. Marvin Gertsen. 371
Stability-augmentation system gain determination by digital computer. John Frederick Muller. 434
Evaluation of B-52 structural response to random turbulence with stability augmentation systems. John B. Dempster and Kenneth L. Roger. 507
Systematic determination of simplified gain scheduling programs. John Frederick Muller. 529
Inertial platform stabilization criteria for arbitrary vehicle maneuvers. Bernard Hanisch. 534
Rolling moment due to sideslip of delta wings. David L. Kohlman (EN). 565
A large-scale test vehicle for VTOL ground effects studies. W. W. Watson, Rahim Lavi, and H. Asdurian. 547

VTOL Stability and Control

Dynamic analysis of the rigid rotor system. Akira Azuma. 203
A hover augmentation system for helicopters. R. S. Buffum and W. T. Robertson. 315
Control-power usage for maneuvering in hover of the VJ 101 aircraft. J. Schaeffler, H. Alscher, G. Steinmetz, and J. B. Sinacori. 445
A large-scale test vehicle for VTOL ground effects studies. W. W. Watson, Rahim Lavi, and H. Asdurian. 547

Marine Vehicle Stability and Control

Use of jet-flapped hydrofoils as ship antipitching fins. Paul Kaplan and Theodore R. Goodman (MSS). 165

Gust Loading and Wind Shear

Evaluation of B-52 structural response to random turbulence with stability augmentation systems. John B. Dempster and Kenneth L. Roger. 507
Initial *VGH* data on operations of small turbojets in commercial transport service. Paul A. Hunter. 513
Evaluations of a spectral gust model using *VGH* and *V-G* flight data. John M. Firebaugh. 518

INFORMATION AND CONTROL SYSTEMS

Factors influencing glide path control in carrier landing. Tulvio S. Durand and Richard J. Wasicko. 146
Systematic determination of simplified gain scheduling programs. John Frederick Muller. 529
Landing task and pilot acceptance of displays. R. A. Behan and F. A. Siciliani. 141
Stability-augmentation system gain determination by digital computer. John Frederick Muller. 434

NAVIGATION

Analytic platforms in cruising aircraft. James L. Farrell. 52

TESTING

Aerospace ground equipment reduction by built-in testing. T. L. Yount (EN). 396
Computerized aircraft synthesis. Vernon A. Lee, H. Glenn Ball, E. A. Wadsworth, W. J. Moran, and J. D. McLeod. 402
Improving the quality of motion reproduction in moving-base, piloted flight simulators. George R. Mills. 439
A method for in-flight measurement of ground effect on fixed-wing aircraft. William Schweikhard. 101
Wind-tunnel sonic-boom testing techniques. H. W. Carlson and O. A. Morris. 245
A large-scale test vehicle for VTOL ground effects studies. W. W. Watson, Rahim Lavi, and H. Asdurian. 547
A 20-ft-diam ribbon parachute for deployment at dynamic pressures above 400 psf. William B. Pepper (EN). 265
Response of bare wire thermocouples to temperature variations in a jet engine intake. G. R. Hall and J. A. Bogdanovic (EN). 394
Wind-tunnel simulation of store jettison with the aid of an artificial gravity generated by magnetic fields. Eugene E. Covert. 48
Use of statistically designed experiments in wind-tunnel test programs. David L. Motyeka and Peter J. Skowronek Jr. 297
Comment on "Wind-tunnel simulation of store jettison with the aid of an artificial gravity generated by magnetic fields." M. C. Smith (TC). 570

BIO-ENGINEERING

A logistics-independent oxygen system for military aircraft. R. A. Wynveen. 502
Space radiation dose rates in the earth's atmosphere. J. W. Haffner. 65
Ozone measurement survey in commercial jet aircraft. Robert I. Brabets, Charles K. Hersh, and Morton J. Klein. 59
Improving the quality of motion reproduction in moving-base, piloted flight simulators. George R. Mills. 439
Landing task and pilot acceptance of displays. R. A. Behan and F. A. Siciliani. 141
Factors influencing glide path control in carrier landing. Tulvio S. Durand and Richard J. Wasicko. 146

AEROSPACE AND MARINE SCIENCES

An oceanographic aircraft. J. J. Schule Jr. and J. C. Wilkerson (EN, MSS). 174
Nature and causes of clear-air turbulence. David W. Saxton. 356
Some applications of power spectra to airplane turbulence problems. Roy Steiner and Kermit Pratt. 360